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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,566	11/20/2001	Yukuo Katayama	3094-32	1185
29540	7590	03/02/2004	EXAMINER	
PITNEY, HARDIN, KIPP & SZUCH LLP			RIDLEY, BASIA ANNA	
685 THIRD AVENUE			ART UNIT	PAPER NUMBER
NEW YORK, NY 10017-4024			1764	

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,566

Applicant(s)

KATAYAMA, YUKUO

Examiner

Basia Ridley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>092504</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The "European Search Report" and "Annex To The European Search Report" cited in the information disclosure statement filed on 25 September 2003 have been considered, but will not be printed on any patent resulting from this application.

Specification

2. The disclosure is objected to because of the following informalities:

- inconsistent numbering of elements: e.g. "clean gas (...) line 17" (P9/L6-7), and "ammonia and the dust (...) line 17" (P11/L25-26 and drawing).

Appropriate correction is required. Applicant is reminded that no new matter shall be added.

Drawings

3. The drawing(s) is/are objected to as failing to comply with 37 CFR 1.84(q) because the reference character(s) are lacking lead line(s) between themselves and the detail(s) to which it/they refers(s), e.g. 3, 6, 8, 11, 12. Applicant is reminded that reference characters which do not need lead lines because they indicate surface or cross-section on which they are placed must be underlined to make it clear that a lead line has not been left out by mistake.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "6" has been used to designate both steam/coal line and a gasification reactor. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee (USP 3,957,460).

Regarding claim 1-3 and 5-6, Lee discloses a method for gasification of coal wherein:

- a slurry of coal and water (1) is supplied to a gasification reactor (5); and wherein
- at least a part of the water is supplied in a form of steam to the gasification reactor (abstract);
- substantially all of the water is supplied in a form of steam to the gasification reactor (abstract, C3/L1-22);
- a mixture is supplied to the gasification reactor, the mixture being obtained by heating the slurry of coal and water to 150°C to 450°C at a pressure of 0.2 to 11.5 MPa to thereby vaporize at least a part of the water (C2/L64-68 and C3/L33-56);
- (4) the slurry of coal and water is heated with a heating medium having temperature of 200°C to 600°C;
- a water content is in a range of from 27 to 50 weight % based on a total weight of the slurry (C4/L38-41);
- the coal is pneumatically transferred by steam into the gasification reactor, the steam being obtained by heating the slurry of coal and water (C3/L1-29).

7. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Forney et al. (USP 4,244,706).

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Regarding claim 1-6, Forney et al. discloses a method for gasification of coal wherein:

- a slurry of coal and water (25) is supplied to a gasification reactor (35); and wherein
- at least a part of the water is supplied in a form of steam to the gasification reactor (abstract, C3/L5-43);
- substantially all of the water is supplied in a form of steam to the gasification reactor (abstract, C3/L5-43);
- a mixture is supplied to the gasification reactor, the mixture being obtained by heating the slurry of coal and water to 150°C to 450°C at a pressure of 0.2 to 11.5 MPa to thereby vaporize at least a part of the water (abstract, C3/L5-43);
- the slurry of coal and water is heated with a heating medium having temperature of 200°C to 600°C (C3/L12-23);
- a water content is in a range of from 27 to 50 weight % based on a total weight of the slurry (C2/L66-C3/L1);
- the coal is pneumatically transferred by steam into the gasification reactor, the steam being obtained by heating the slurry of coal and water (abstract, C3/L5-43).

Claim Rejections - 35 USC § 102 or 35 USC § 103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim(s) 4 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lee (USP 3,957,460).

Regarding claims 4, Lee discloses all of the claim limitations as set forth above.

Additionally, while the reference does not explicitly disclose a heating medium having temperature of 200°C to 600°C used to heat the slurry of coal and water, as slurry of coal and water is heated in an indirect heat exchanger (2, see drawing), said indirect heat exchanger will, inherently, comprise heating medium that appears to be the same as, or an obvious variant of the heating medium set forth in the instant claim.

Further the examiner notes that the specific temperature of the heating medium used in the indirect heat exchanger (2) is not considered to confer patentability to the claims. As the temperature to which the coal and water slurry is preheated in the indirect heat exchanger (2) is a variable that can be modified, among others, by adjusting said temperature of the heating medium used in the indirect heat exchanger (2), with said temperature to which the coal and water slurry is preheated increasing as the temperature of the heating medium is increased, the precise temperature of the heating medium would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed temperature of the heating medium cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the temperature of the heating medium in the process of Lee to obtain the desired temperature to which the coal and water slurry is preheated (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held

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that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Conclusion

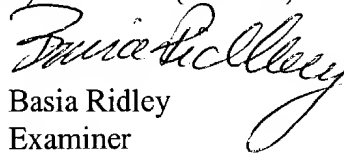
10. In view of the foregoing, none of the claims are allowed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453. The examiner can normally be reached on Monday through Thursday, from 9:00 AM to 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).


Basia Ridley
Examiner
Art Unit 1764

BR
February 23, 2004